

## **REMARKS/ARGUMENTS**

Claims 1 through 10 have been objected to because of the following informalities: claims 1 and 8 should have the word "tube" replaced by "retro-tube". Claim 8 should be numbered claim 6. Claims 1 through 10 have been canceled and replaced by new claims 11 through 14. Appropriate correction has been made.

Claims 1 through 10 have been rejected under 35 USC 103(a) as being unpatentable over Gilbert (4,920,745) in view of Clemmens (5,050,378). The examiner has stated in part that Gilbert discloses a typical tuned exhaust system of the expansion chamber type that causes a negative wave front to reach an exhaust port at a particular time and a rebound positive wave front. It is further stated the returning positive wave front is commonly referred to as a "plugging pulse". The examiner further references Clemmens as disclosing a secondary air tube communicating with an exhaust chamber.

Claims 1 through 10 have been canceled and replaced by new claims 11 through 14 to more distinctly claim the instant invention as originally disclosed in the application. Support for the new claims is in the original specification and drawings.

The instant invention as now claimed is not a typical two-stroke engine of the tuned exhaust, divergent and convergent, type nor does it have cylinder intake ports associated with a scavenging crankcase ported engine that may use pumping action to move air from a crankcase to a cylinder. A retro-tube of approximately constant diameter is attached to an exhaust port of an engine. The retro-tube has a volume approximately equal to the swept volume of the piston movement in the cylinder. There may be minimal wave action in the retro-tube relative to the effects of the gas inertia caused by the exiting exhaust gas particle velocity after combustion.

The flow of air through the retro-tube may cool the retro-tube as compared to other internal combustion engines. The retro-tube may function well over the engine speed range as it is unlike a tuned pipe for a specific speed. While the retro-tube may perform well with an open exhaust end, the plenum chamber with a secondary air tube and an exhaust receiver tube may allow attachment of a

**Amendments to the Drawings:**

The attached sheet of drawings includes changes to Fig. 2. This sheet, which includes Fig. 2, replaces the original sheet including Fig. 2.

Attachment: Replacement Sheet and Annotated red line sheet showing changes.

noise suppression or muffler system to reduce noise output.

It is believed with the clarifying remarks and the amendments that the uniqueness of the instant invention is not disclosed in the cited art. While various methods have been tried in the past, two-stroke engines such as those for which the present invention is intended still use ported crank case systems and tuned exhaust systems. There has been a long felt need for a solution to this problem. Applicant believes that the unique solution although being simple in its implementation was not obvious to those involved in the art of two-stroke engine design.

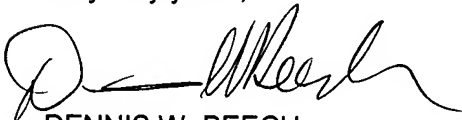
Accordingly it is believed that the rejections under 35 USC Section 103(a) have been overcome by canceling and amending of the claims and the remarks, and withdrawal thereof is respectfully requested. Amendment and corrections of drawings are for identification of elements of the invention.

In view of the above, it is submitted that the claims are in condition for allowance. Reconsideration of the cause for rejections and objections is requested. Allowance of claims 11 through 14 is earnestly solicited.

No additional fee for claims is seen to be required. An extension is requested under 37 CFR § 1.17(a)(2) for two months to August 16, 2005 for a fee of \$225.00.

If you have any questions do not hesitate to contact me.

Very truly yours,



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Attachments: 2 Drawing Sheets with Red Line Sheet and Replacement Sheet

Annotated Sheet Showing Changes

